



AQUALUMA®
LED LIGHTING

AUSTRALIAN MADE
QUALITY FOR 13 YEARS

GEN 5
PREMIUM
UNDERWATER LIGHTS

INSTALLATION MANUAL

GEN5 9 SERIES THRU-HULL
GEN5 24 SERIES THRU-HULL

Designed and manufactured in Australia

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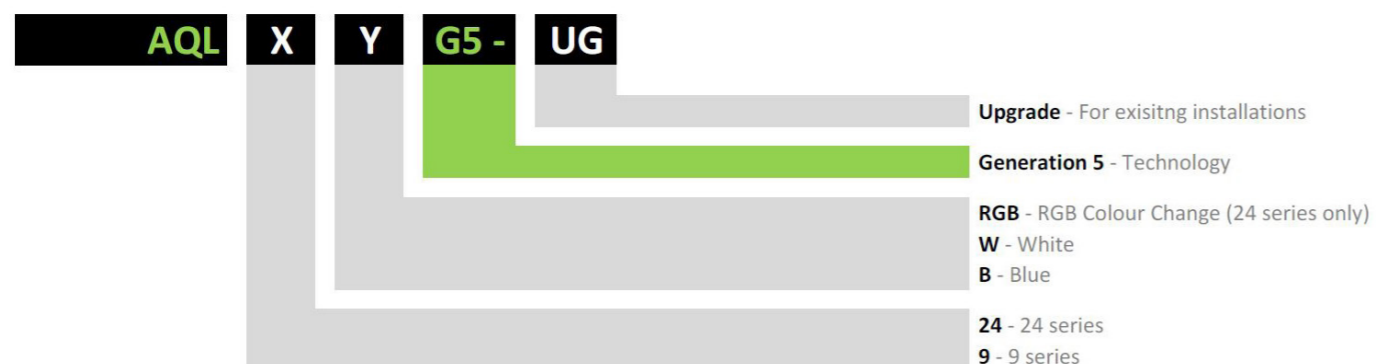
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Installation Manual : Version 1.0 - 11/06/19

Product Brand: Aqualuma LED Lighting

Product name: GEN5 Thru-Hull Underwater Light

Product Code: (Refer to purchase records for exact model)



Congratulations on purchasing your Australian Designed & Manufactured underwater light from Aqualuma LED Lighting.

All Aqualuma lights are tested prior to shipment for quality and operation, if you are experiencing any issues prior to installation, please contact us immediately.

Aqualuma's cutting-edge design and high quality products use LED (Light Emitting Diode) technology, where light is not solely for illumination, but also used to create a memorable atmosphere.

At Aqualuma we don't just make lights, we create memories.

All Aqualuma's Thru-Hull lights are designed to be interchangeable from inside the hull. After initial installation, upgrades can be installed without the need for a yard visit or haul out.

It is recommended that you use a qualified marine electronics installer or boat yard facility to perform the placement and installation of your new underwater lights.

WARNING

- Before installing your Aqualuma LED light, please read and follow all warning notifications and installation instructions included with this product. Failure to do so can result in property damage, severe injury and nullification of the product warranty.
- Do not attempt to install the light housing while the vessel is in the water.
- Please confirm the correct supply voltage 12 or 24v DC for the 9 Series or 24 Series light.
- We recommend all connections are made water tight.
- Do not remove the LED light engine from the housing or driver prior to installation, the assembly can be installed directly from the box.
- Please confirm the location arrow is pointing up and the optics/LED are horizontal to the housing.
- Do not stare directly into a powered LED light fixture.
- Always use a suitable circuit breaker/fuse assembly during installation.
- Do not over tighten the retaining nut.
- **Please allow sufficient space behind the light housing to allow for general maintenance and future upgrades before install. (See page 14 - 15 with 9 and 24 Series minimum distance setbacks.)**

All Aqualuma Thru Hull lights have been tested before shipping.
 GEN 5 Series Thru-Hull lights can be operated when the vessel is out of water.
 There is no bonding to anodes required.

Aqualuma recommends that you use a qualified boat builder / marine electrician to work out placement and fitting of your new underwater lights and control box unit/s.

You will require the following to install your Aqualuma Thru Hull lights:

- Hole Saw 9 series – 60mm (2 3/8")
 24 series – 76mm (3")
- Drill bit for pilot hole.
- Wire connectors.
- Fuse or circuit breaker.
- Sealant; any sealant approved for below waterline use.
- Marine cable; (see wiring chart guide page 8-9) sufficient to supply load of: qty of lights + cable length + current draw.



STEP 1 - FIXTURE INSTALL

With boat on hardstand or trailer calculate the spacing's based on the width of the boat and the number of lights you want to fit. All lights should be 250-300mm (10 in") below water line (if possible not critical).

Recommended light spacing (guide only):

- Transom / Stern 800mm (32 in")
- Side / Port or Starboard 1500mm (60 in")

Mark the hole centres with a marker, be careful to check the inside of the boat for any obstacles in the area you want to drill. With that done, you may now drill a small pilot hole. Now double check inside the boat again for anything that may obstruct the housing and retaining nut. Once you are sure you have the correct position you can drill through the hull with specified hole saw.

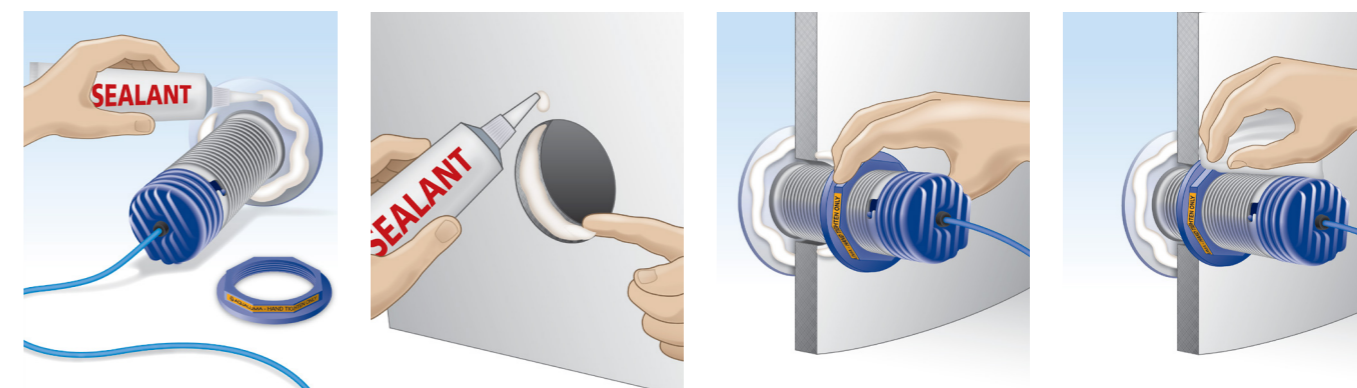
STEP 2

Remove the light fixture from box, there is no need to take the light apart. Remove the retaining nut from the housing and clean the inside surface of the flange, clean the surface of the hull removing all anti-fouling from flange area and wipe clean.

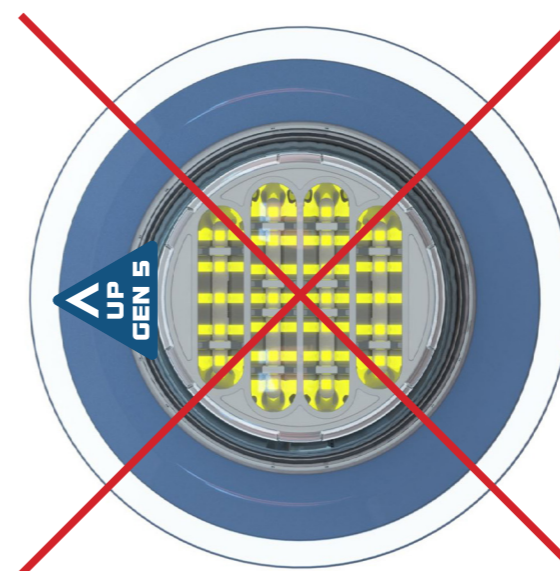


STEP 3

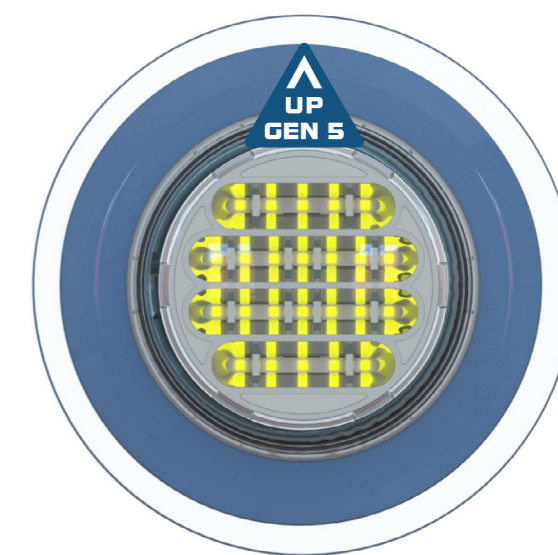
You are now ready to install the complete light fixture into the hull - **do not disassemble the light fitting from the housing.** Apply a generous amount of sealer to the inside flange of the housing and carefully slide the housing cable into the hole with someone inside the boat ready to attach the nut. Apply a small amount of sealant to inner surface around hole inside the perimeter of the flange, then hold the housing flush with the outside surface of the boat. It is important to orientate the fixture before tightening the nut, see below. Once the lens has been aligned, tighten the nut by hand until tight. The nut should only be hand tightened to prevent the sealant from being squeezed out.



See below correct lens alignment;



Incorrect Installation



Correct Installation

STEP 4

Clean excess sealant from around the housing and check to make sure you have a seal all the way around the flange to the outside edge of the housing.

Remove any sealant from the face of the housing and lens area prior to drying.



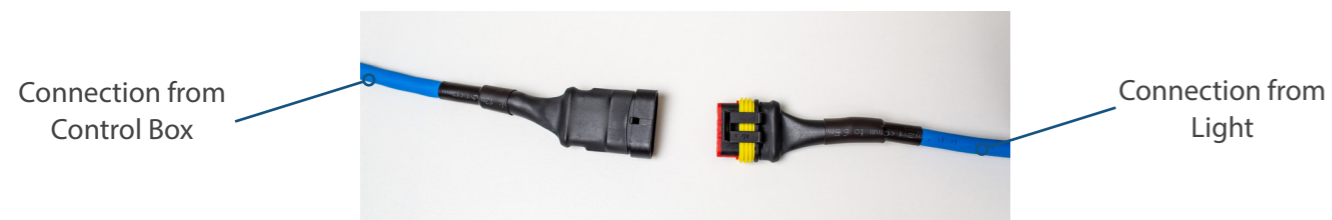
STEP 1 - CONTROL BOX INSTALL

The GEN 5 Control Box should be mounted with cable glands at the bottom of the box (this allows moisture run off). The Control Box should be mounted high enough that minor bilge flooding wont submerge the box. The Control Box carries an IP65 rating (IP65 rated as "dust tight" and protected against water projected from a nozzle). The box is to be mounted using the holes in the metal mounting bracket with the supplied grommets and must be installed between mounting surface and mounting plate.



STEP 2 - CONTROL BOX CABLE TO LIGHT INSTALL

The GEN 5 Control Box is built to control up to four lights at anytime. If more GEN 5 lights are installed, extra control boxes will be required. Depending on the number of purchased fixtures the Control Box is supplied with IP68 rated connectors which can only be connected one way to the light engines (please refer photo below.)



When installing and connecting cables, it is best to attempt to install the cable above light level if possible. It is also recommended that the light cable has a slight drop down at the back of the light fixture before going up to allow for any moisture to run off to the lowest point.



Your control Box is numbered 1 to 4. It is best to connect your units in order of placement from Port to Starboard. (this will allow for easier programing of scenes)

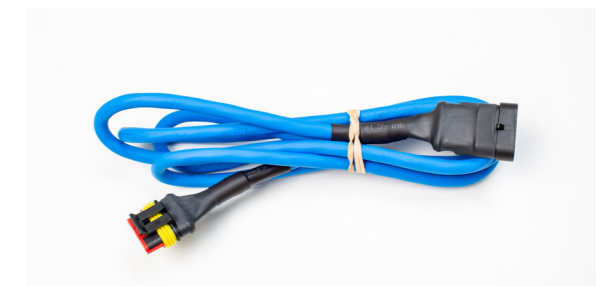
If using multiple Control Boxes connect in order eg:

- Box 1 port side 1-2-3-4
- Box 2 stern 5-6-7-8
- Box 3 Starboard 9-10-11-12

The length of the supply cables can not be altered. You will need to calculate distance from the box to the light to ensure the cable will reach. Cable lengths are as follows:

- Light has 1m length of cable.
- Control Box has 1m length of cable.
- Interface extensions are 2m in length (sold separately).

If you require longer length cables they are available as an accessory from your Aqualuma agent. We would recommend that no more than an extra 2 m length is used .

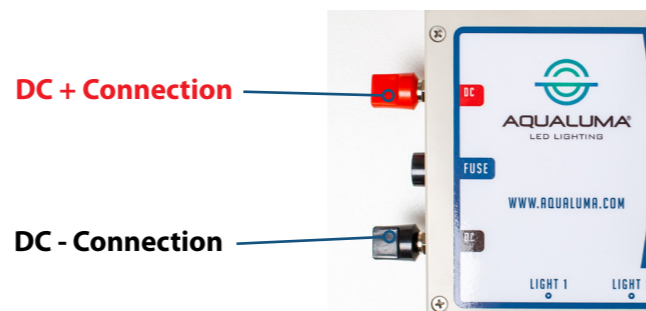


2m Cable Extensions

STEP 3 - CALCULATING DC POWER CABLE SIZE

When supplying the DC feed cables to your Control Box, it is essential that the supply cable size and length is taken into consideration for trouble free operation of your units.

Please note that the supply cable used should only be of a type suitable for a marine environment. eg. Tinned copper as a bare minimum. Please refer to below chart to select your model control box and the corresponding cable size recommendation.



MODEL	Draw 12V (single light)	Draw 24V (single light)	Draw (box of 4 lights)
9 Series	1.7 Amps	12V ONLY	6.8 Amps at 12V
24 Series	24V ONLY	2 Amps at 24V	8 Amps at 24V
24 Series RGB	24V ONLY	2 Amps at 24V	8 Amps at 24V

Low voltage power systems often operate at rather high current levels. If the interconnecting cables are too small, a large proportion of the power available will be wasted in the cable itself. This loss can be reduced by using a larger cable. The acceptable maximum voltage drop for DC loads is 5% of nominal battery voltage.

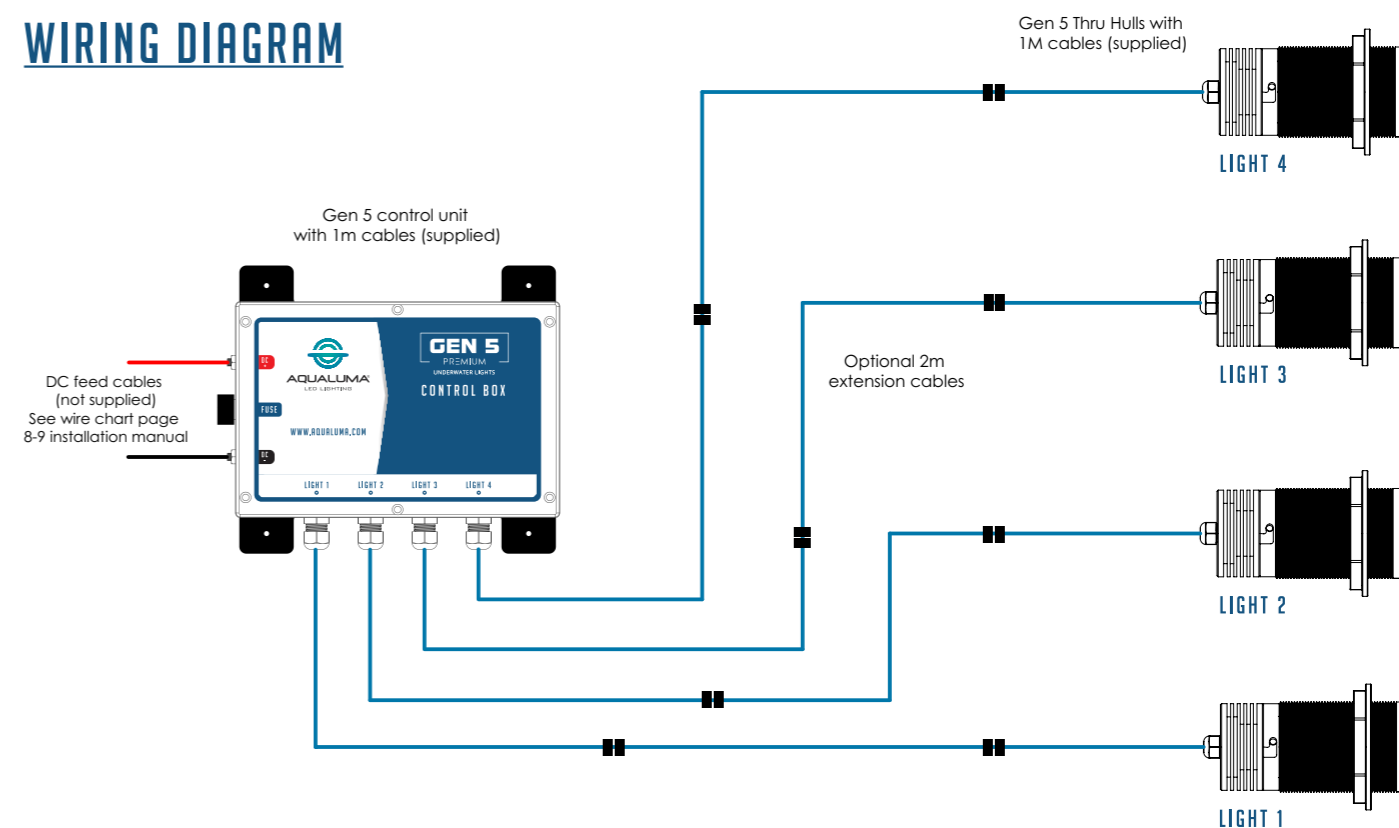
12 VOLT WIRE CHART - 9 SERIES ONLY

AMPS	Acceptable cable size (mm2)				AWG			
	Cable Length (metres)				Cable Length (Feet)			
	1m	2m	5m	10m	3.28ft	6.56 ft	16.40 ft	32.80 ft
0.5	0.4	0.4	0.4	0.4	21	21	21	21
1	0.4	0.4	0.4	1.84	21	21	21	14
1.5	1.84	1.84	1.84	1.84	14	14	14	14
2	1.84	1.84	1.84	1.84	14	14	14	14
3	1.84	1.84	1.84	1.84	14	14	14	14
4	1.84	1.84	1.84	2.9	14	14	14	12
5	1.84	1.84	1.84	4.6	14	14	14	11
7.5	1.84	1.84	2.9	4.6	14	14	12	11
10	1.84	1.84	4.6	7.9	14	14	10	8
15	1.84	1.84	4.6	13.6	14	14	11	6
20	2.9	2.9	7.9	13.6	12	12	8	6
25	4.6	4.6	7.9	25.7	9	9	8	3
30	4.6	4.6	13.6	25.7	9	9	6	3
40	7.9	7.9	13.6	25.7	8	8	6	3

24 VOLT WIRE CHART - 24 SERIES ONLY

AMPS	Acceptable cable size (mm2)				AWG			
	Cable Length (metres)				Cable Length (Feet)			
	1m	2m	5m	10m	3.28ft	6.56 ft	16.40 ft	32.80 ft
1	0.4	0.4	0.4	1.84	21	21	21	14
2	1.84	1.84	1.84	1.84	14	14	14	14
3	1.84	1.84	1.84	1.84	14	14	14	14
4	1.84	1.84	1.84	1.84	14	14	14	14
5	1.84	1.84	1.84	1.84	14	14	14	14
7.5	1.84	1.84	1.84	2.9	14	14	14	12
10	1.84	1.84	1.84	4.6	14	14	14	11
15	1.84	1.84	2.9	4.6	14	14	12	11
20	2.9	2.9	4.6	7.9	12	12	11	8
25	4.6	4.6	4.6	7.9	11	11	11	8
30	4.6	4.6	4.6	13.6	11	11	11	6
40	7.9	7.9	7.9	13.6	8	8	8	6

WIRING DIAGRAM



CONTROLLING YOUR LIGHTS WITH THE CASAMBI APP

Once your lights are installed in the boat its time to sync up your chosen device to the lights.

The Casambi functionality application can be downloaded either through the Apple App store on IOS or the Google Play Store on Android devices.

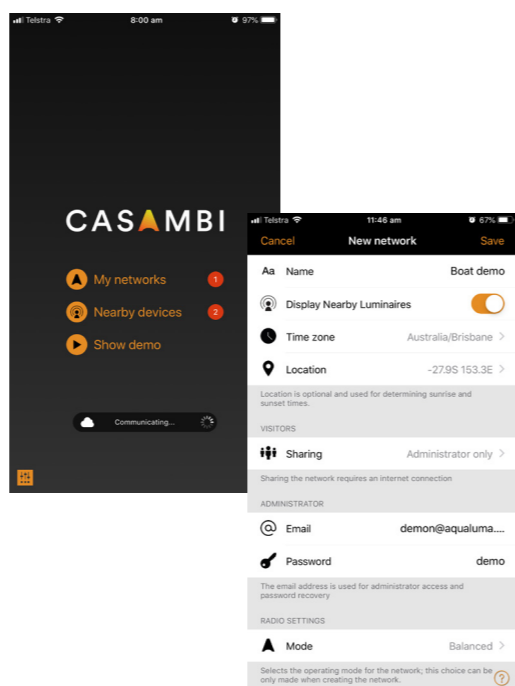


CASAMBI

STEP 1 - CREATING A NETWORK

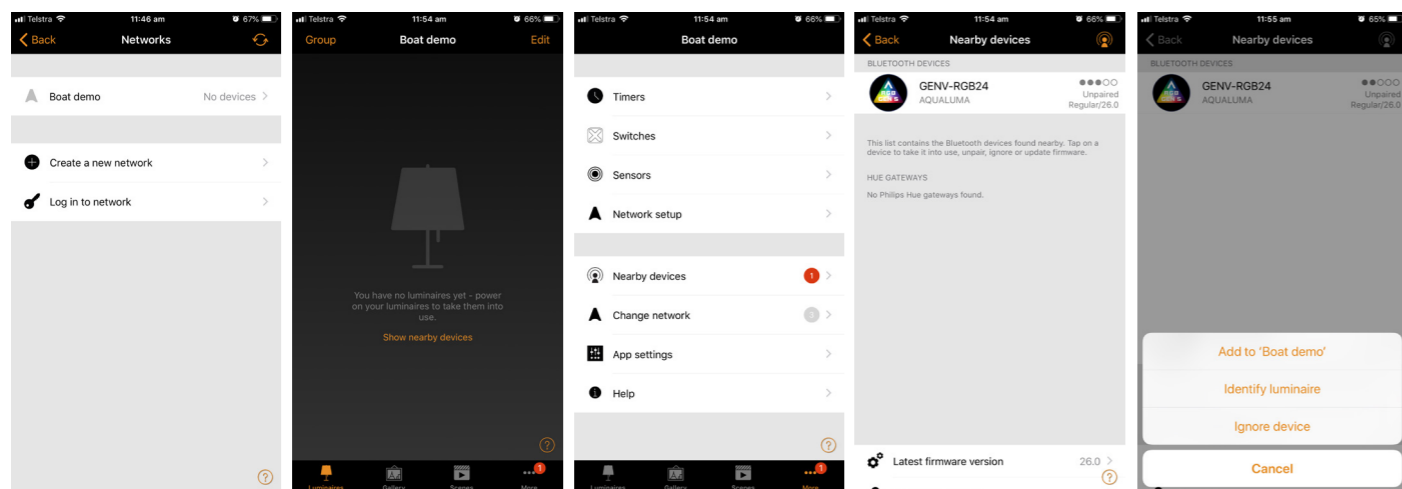
Once the Casambi Application is installed on your device a network is required to control all lights from the Luminaries tab. Make sure your Aqualuma Thru-Hull lights are powered on and load up the app.

1. Firstly, tap **"My Networks"** to bring up the networks tab, once inside the networks tab tap **"create a new network"**. Once inside the new networks tab assign your network a name "eg. Boat Demo" and then select the location tab to set your GEO locator (this is used to assign scenes with time control, discussed later). Next, select sharing and assign the access to **"Administrator only"**, then add an email address and password for the network so it can be recovered later if needed. Do not enter the email address shown in the example, use your own. Tap save. You now have a network that the luminaries can be added into.



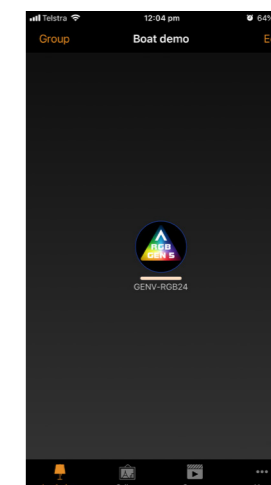
STEP 2 - ADDING LIGHTS TO THE NETWORK

2. Next tap the newly created network. This will take you to the default screen for Casambi app showing four tabs: Luminaires, Gallery, Scenes and More. Tap the **"more tab"** then tap **"Nearby Devices"** and select your GEN5 Aqualuma lights from the nearby devices list. Once selected you will be prompted to add the lights to the made network. Your Aqualuma lights have now been added into your network and are ready for full control.

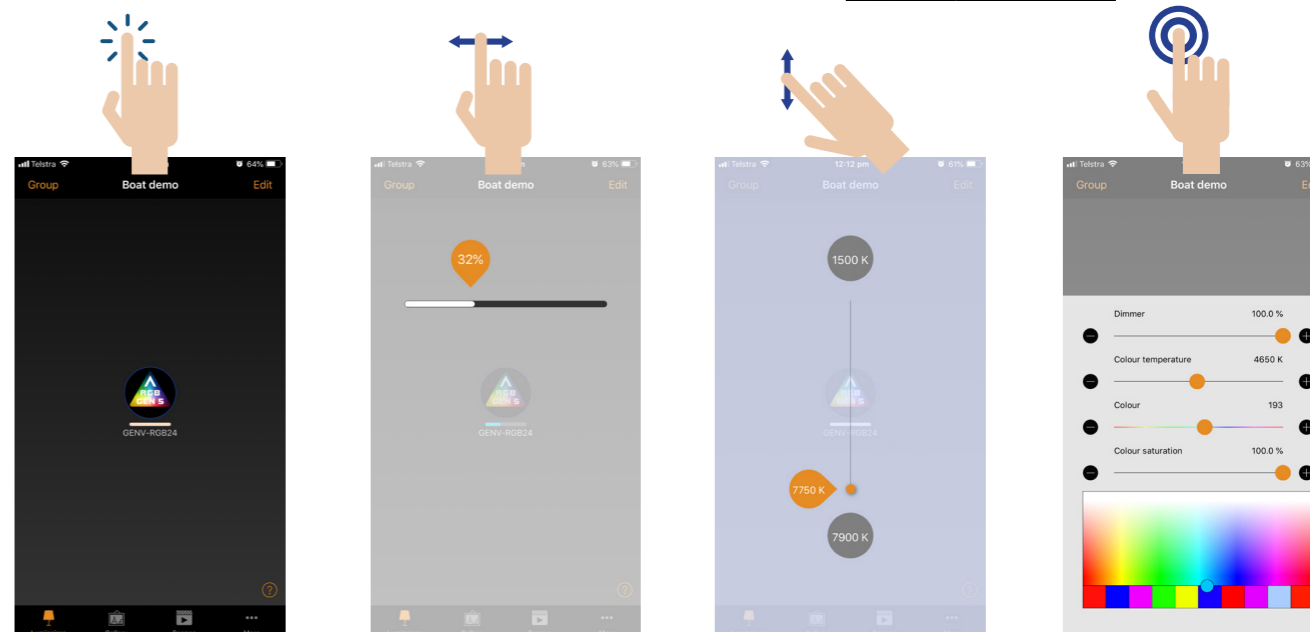


STEP 3 - BASIC GESTURES

3. After you have taken your Aqualuma lights into your network, hit back to the previous page and tap the **"Luminaries"** tab. You should now see the name of your lights and an image in the center of the screen as displayed to the right in the demo image. From here you can turn your lights on and off, adjust the colour output, adjust colour temperature, adjust light brightness, set lighting scenes and create groups.



Default light control tab.



To turn your lights on or off, simply **tap** your lights icon control.

To dim your lights, simply **tap hold and pan** your finger **left and right**.

To adjust the colour temperature, simply **tap hold and pan** your finger **up and down**.

To adjust the colour of your lights, **tap and hold** on the your icon this will bring up a colour palette with adjustable sliders like the example shown above. Favourite colours can be saved in the swatches boxes at the bottom of the screen by setting the desired colour then pressing and holding an empty swatch box.

WARRANTY STATEMENT

Aqualuma warrants the GEN5 Thru-Hull Series of lights with a Three (3) year warranty on internals and a ten (10) year warranty on the housing to be free of defects in workmanship and materials.

Aqualuma warranty will be deemed void if the product is improperly maintained or as a result of misuse, neglect, improper installation or natural disasters such as flood, fire, lightning or unauthorized repairs or modifications.

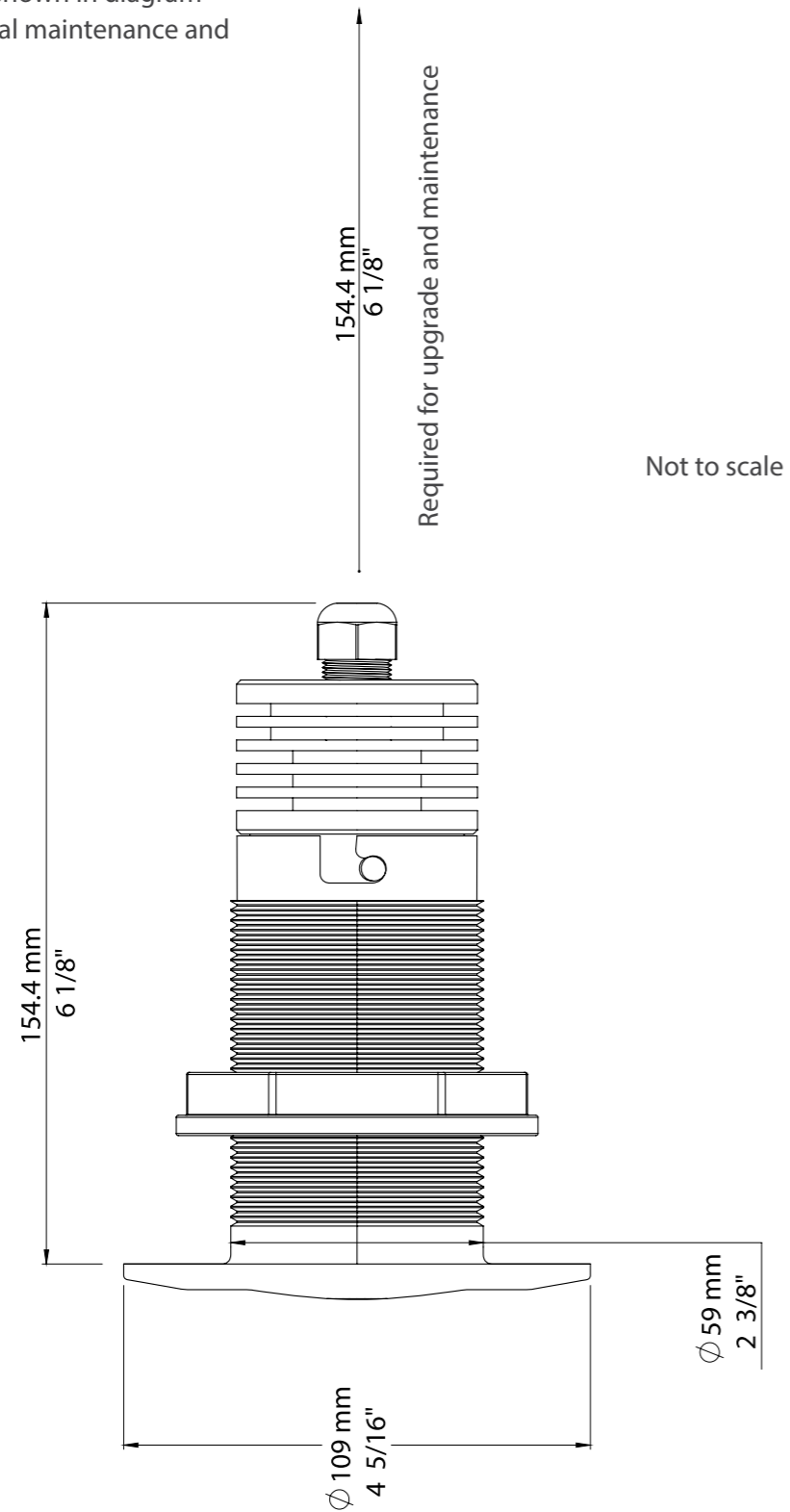
Aqualuma will replace at it's option any product or part free of charge upon return of the defective item and will pay for return freight within the warranty period.

Aqualuma's liability in all claims and events is limited to and shall not exceed the purchase price of the Aqualuma product. No affirmation of fact or warranty expressed or implied other than that set out in the warranty statement above is made or authorized by Aqualuma.

Aqualuma disclaims any liability claims that are due to misapplication, improper selection or misuse. Any liability for consequential or accidental damages is expressly disclaimed.

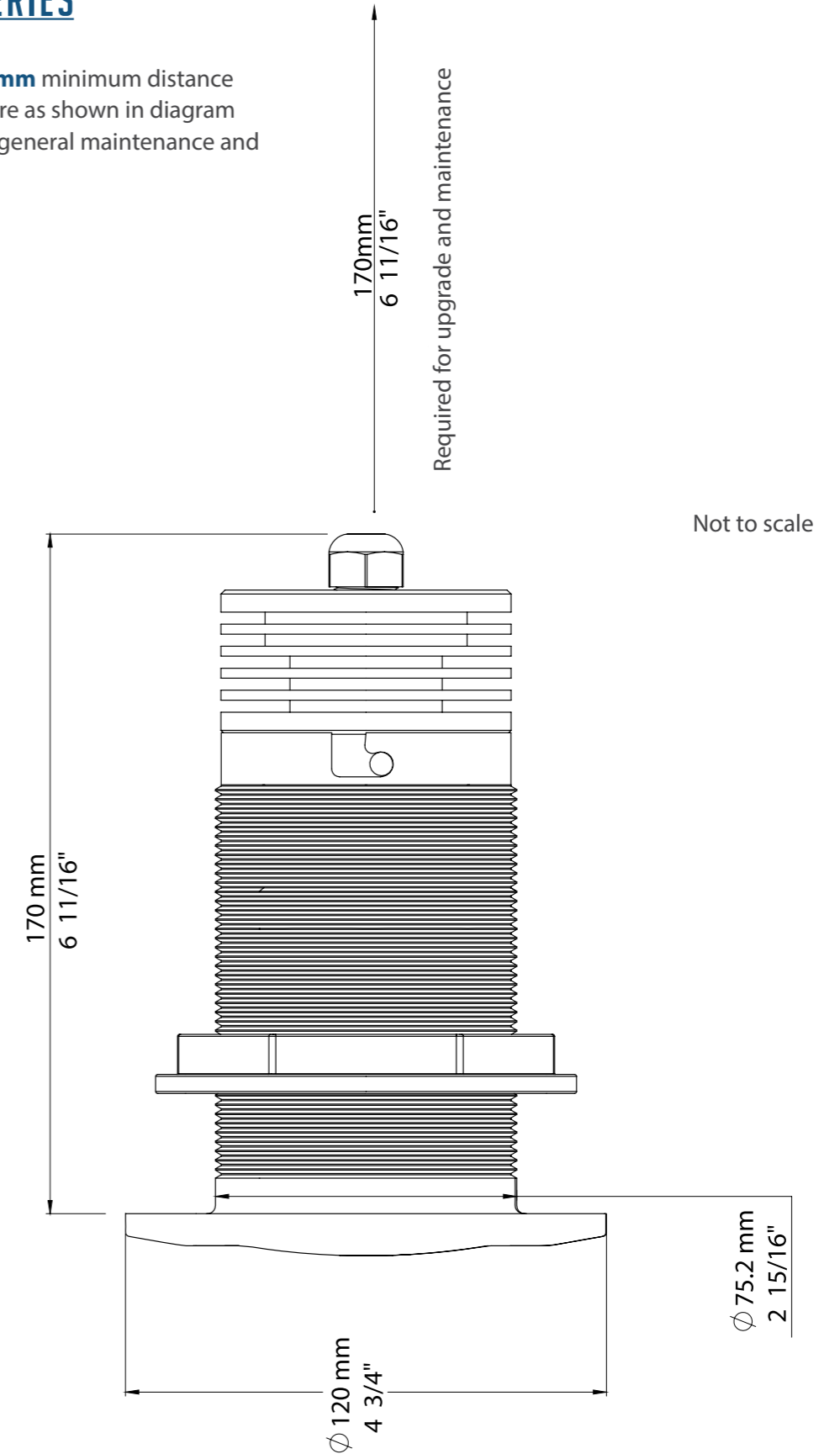
GEN 5 - 9 SERIES

Please allow for **156mm** minimum distance behind lighting fixture as shown in diagram for future upgrades, general maintenance and problem shooting.



GEN 5 - 24 SERIES

Please allow for **170mm** minimum distance behind lighting fixture as shown in diagram for future upgrades, general maintenance and problem shooting.





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